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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,818	12/12/2003	Date-Gun Lee	20067/OPP031054US	2252
34431	7590	10/28/2005	EXAMINER	
HANLEY, FLIGHT & ZIMMERMAN, LLC			PERT, EVAN T	
20 N. WACKER DRIVE			ART UNIT	
SUITE 4220			PAPER NUMBER	
CHICAGO, IL 60606			2826	

DATE MAILED: 10/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/734,818	Applicant(s) LEE, DATE-GUN	
	Examiner Evan Pert	Art Unit 2826	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1203</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Drawings*

2. Figures 1A and 1B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated per [0009]. See MPEP § 608.02(g).

### *Specification*

3. The specification contains informalities *such as* “,” and “to methods to fabricate” in [0001]. Applicant should review and correct the specification, everywhere appropriate.
4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
5. The disclosure is objected to because it fails to identify any example of a combination of “photoresist”, “insulating layer” and “etchant” that can be used together for practicing the invention:

Particularly, the limitations of “simultaneously etching the photoresist pattern and the insulating layer” in the context of “setting an etch stop point” is not enabled:

As is well known in the art, an organic “photoresist” is used as a patterned mask for etching a pattern in an inorganic “insulating” layer, which means that the “photoresist” in the prior art is not etched, when the “insulating” layer is etched (e.g. see U.S. 4,376,672).

Applicant's claimed invention is different than what is well known in the art in that "photoresist" and "insulating" layer material are removed "simultaneously," with the etching rates of photoresist and insulating layer chosen to allow "setting an etch stop point" by choosing appropriate thicknesses of the "photoresist" and "insulating layer" with respect to "etching rates" of the "photoresist" and "insulating layer."

Since no particular insulating material, photoresist or etching technique is identified for the invention; one of ordinary skill in the art would require undue experimentation to determine an appropriate photoresist/insulating-layer/etching-technique combination to arrive at applicant's invention.

The thicknesses claimed for "photoresist," for example, in claims 2 and 3, wouldn't work for practicing the invention with "photoresist" and "insulating layer" in US 4,376,672 where the "photoresist" masks but does not etch when the "insulating" layer is etched.

***Claim Rejections - 35 USC § 112***

6. Claims 1-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

The claims contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Specifically, "photoresist" and an "insulating layer" of the prior art such as US 4,376,672 would not work for "setting an etch stop point" since the "photoresist" in the '672 reference does not etch (it's a mask) when the insulating layer is etched.

Art Unit: 2826

7. Claims 5-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention:

Claims 5-9 speak in even more generalized terms that the anonymous “photoresist” and “insulating layer” set forth as a basis for rejection under item 6 above. Applicant has given no specific examples and cited prior art contradicts the generalized description of the invention; therefore generic claims 5-9 do not meet the *written description* requirements of 35 USC 112, 1<sup>st</sup> paragraph.

### **Conclusion**

8. Applicant may:

- File a continuation-in-part application establishing an enabled disclosure, or
- Overcome the rejections under 35 USC 112 by presenting evidence contrary to US 4,376,672 that appropriate selection of a particular “photoresist”, “insulating” material, and etching technique would be within the skill of an ordinary artisan at the time of the claimed invention, even though applicant speaks in generalized terms without any specific example(s).

Art Unit: 2826


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Evan Pert whose telephone number is 571-272-1969.

The examiner can normally be reached on M-F (7:30AM-3:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ETP  
October 26, 2005

  
**EVAN PERT**  
**PRIMARY EXAMINER**